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EXAMINER	
VUONG, BACH Q	

ART UNIT	PAPER NUMBER
2653	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/991,632	SEO ET AL.	
	Examiner	Art Unit	
	Bach Q. Vuong	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-3,5-9,12,13,15-17,19 and 21-27 is/are rejected.

7)☒ Claim(s) 4,10,11,14,18 and 20 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 01/14/03 & 01/16/0.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3 and 4 of U.S. Patent No. 6,731,586. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the features recited in claims 1 and 23 of the present application are included in claims 1, 3 and 4 of US patent No. 6,731,586. The only difference is the wording of the claimed languages.

Claims of the present application:	Claims of U.S. patent 6,731,586:
1	1 or 3
23	4

Claims 7-13 and 24 fall with their respective parent claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagano (US 6,222,815).

Nagano, according to Figs. 1-3, shows an apparatus for and method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, comprising all features of the claimed invention as indicated below:

Regarding claim 1, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, comprising: sampling the current power value of the optical signal output from the laser diode (see circuit 5 in Fig. 1); comparing the sampled current power value with the basic power value (see Comparator circuit 7); and controlling the output of the laser diode based on the compared results (see ALPC 11).

Regarding claim 2, see Figs. 1-3 which show an apparatus for automatically controlling an output of laser diode based on the results of a comparison between the current power value of an optical signal output from a laser diode and a basic power value, comprising: a sampler (see circuit 5) sampling the current power value output from the laser diode; a register unit

storing the output of sampler (see circuit 5); a basic register unit storing a basic power value (see LPF 8 and Output S5); an operator unit outputting a target output value applied to the laser diode based on the current power value stored in the register unit and the basic power value stored in the basic register unit; and a pulse generator (see circuits 14-15 and 6) generating a control signal controlling a storage timing of the register unit based on recording data to be recorded by the laser diode.

Regarding claim 3 see Fig. 1 which show an apparatus for for automatically controlling an output of laser diode based on the results of a comparison between the current power value of an optical signal output from a laser diode and a basic power value wherein the sampler (see circuit 5) is an analog/digital converter.

Regarding claim 7, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, further comprising holding the sampled current power prior to the comparing (see circuits 5 and 7).

Regarding claim 8, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, further comprising generating a control signal (see S2 based on recording data to be recorded by the laser diode on a medium; storing a basic power value based upon a type of a medium which is to receive the output of the laser diode (see circuit 5); wherein the comparing comprises comparing the stored sampled current power with the basic power value (see circuit 7).

Regarding claim 9, see Fig. 1 which shows a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value wherein basic power value based upon a type of a medium which is based on a format of the medium and a maker of the medium (see circuits 13-15).

Claims 1-3, 5-9, 12, 13, 15-17, 19, 21-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Seo et al. (US 6,731,586).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Seo et al., according to Figs. 1-6, shows an apparatus for and method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, comprising all features of the claimed invention as indicated below:

Regarding claim 1, see Figs. 1-6 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, comprising: sampling the current power value of the optical signal output from the laser diode (see circuits 354-358);

comparing the sampled current power value with the basic power value (see circuit 306); and controlling the output of the laser diode based on the compared results (see circuit 368).

Regarding claim 2, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level, comprising: a sampler (see S/H 202 or 354-358) sampling the current power value output from the laser diode; a register unit (see circuits 368 and 304) storing the output of the sampler; a basic register unit (see circuits 368 and 302) storing a basic power value; an operator unit (operators 204 or 334-342) outputting a target output value applied to the laser diode based on the current power value stored in the register unit and the basic power value stored in the basic register unit; and a pulse generator (see circuits 210 or 364) generating a control signal controlling a storage timing of the register unit based on recording data to be recorded by the laser diode.

Regarding claim 3, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level wherein the sampler is an analog/digital converter.

Regarding claim 5, see Fig. 3 which shows an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level, further comprising a digital/analog converter (see DAC 344-352) converting the output of the multiplexer to a digital/analog signal and then transmitting the digital/analog signal to the laser diode.

Regarding claim 6, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level, wherein the apparatus is built-in into a pickup.

Regarding claim 7, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, comprising: holding the sampled current power prior to the comparing (see circuits 354-358).

Regarding claim 8, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, further comprising: generating a control signal based on recording data to be recorded by the laser diode on a medium (see LD and LD driver 206); storing the sampled current power according to the control signal and prior to the comparing (see circuits 368 and 304); storing a basic power value based upon a type of a medium which is to receive the output of the laser diode (see circuits 368 and 302); wherein the comparing comprises comparing the stored sampled current power with the basic power value (see circuit 306).

Regarding claim 9, see Fig. 3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, wherein the basic power value is based on a format of the medium and a maker of the medium (see column 5, lines 3-15).

Regarding claim 12, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, wherein the sampled current power comprises a first plurality of bits (see circuits 368 and 304), and the basic power value comprises a second plurality of bits, and the comparing comprises simultaneously comparing ones of the first plurality of bits with corresponding ones of the second plurality of bits.

Regarding claim 13, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, wherein the basic power value is based upon a type of a medium and a maker of the medium (see column 5, lines 3-15).

Regarding claims 15, see the rejection applied to claim13.

Regarding claim 16, see the rejection applied to claim 9.

Regarding claim 17, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level, further comprising an NRZI detector (see NRZI detector 366) which receives the recording data, detects an interrelationship between a current mark and front and back spaces of the marks, and output a recording signal to the pulse generator.

Regarding claim 19, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level, wherein the

sampled current power value comprises a first plurality of bits (see circuits 368 and 304), and the stored basic power value comprises a second plurality of bits (see circuits 368 and 302), and the operation unit (see circuits 334-342) simultaneously compares ones of the first plurality of bits with corresponding ones of the second plurality of bits to generate the target output value.

Regarding claim 21, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level, wherein the first plurality of bits are indicative of a read power, a peak power, an erase power and a bottom power of a sector of a medium which is to receive the output of the laser diode (see circuits 308-312).

Regarding claim 22, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode based on the results of a comparison between the current power of an optical signal output from a laser diode and a basic power level, wherein the first plurality of bits are indicative of a read power, a peak power, an erase power, a cooling power and a bottom power of a sector of a medium which is to receive the output of the laser diode (see column 7, line 41 through column 8, line 20).

Regarding claim 23, see Figs. 1-6 which show an apparatus for automatically controlling an output of a laser diode having an optical signal with a current power value comprising: a sampler (see S/H 202 in Fig. 2) sampling the current power value of the optical signal from the laser diode; an operation unit (see operator 204) outputting a target output value based upon the sampled current value and a basic power value based upon a type of medium

which is to receive the output of the laser diode; and a controller (see controller 212 and operator 204) controlling the output of the laser diode based upon the target output value.

Regarding claim 24, see Figs. 1-6 which show an apparatus for automatically controlling an output of a laser diode having an optical signal with a current power value, further comprising: a register unit (see amplifier 304) storing the output of the sampler prior to being received by the operation unit (see Operators 334-342); and a basic register unit (see circuits 368 and 302) storing the basic power value prior to being received by the operation unit.

Regarding claim 25, see Figs. 1-6 which show an apparatus for automatically controlling an output of a laser diode having an optical signal with a current power value comprising: a sampler (see S/H 354-358) sampling the current power value of the optical signal from the laser diode, to generate a sampled value having a first plurality of bits indicative of a plurality of power levels; a basic storage unit (see circuits 368 and 302) storing a basic power value according to a type of a medium which is to receive the output of the laser diode and based upon the plurality of power levels; an operation unit (see Operators 334-342) simultaneously comparing ones of the first plurality of bits with corresponding ones of the second plurality of bits to generate a target output value; and controller (see controller 368) controlling the output of the laser diode based upon the target output value.

Regarding claim 26, see Fig. 1-3 which show an apparatus for automatically controlling an output of a laser diode having an optical signal with a current power value wherein the basic power level is based on upon a format of medium and a maker of the medium (see column 5, lines 3-15).

Regarding claim 27, see Figs. 1-3 which show an apparatus for automatically controlling an output of a laser diode having an optical signal with a current power value further comprising a register unit (see controller 368 and amplifier 304) storing the current power value prior to being received by the operation unit.

Allowable Subject Matter

Claims 4, 10, 11, 14, 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4, 10, 11, 14, 18 and 20 are allowable over the prior art of record because all cited references, considered as closest prior art and viewed in combination or individual, fails to suggest or fairy teach an apparatus for automatically an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from a laser diode and a basic power value including all features as particularly recited in each of claims 4 and 10. Claims 11, 14, 18 and 20 fall with their respective parent claim.

Cited References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references relate to an apparatus for and method of controlling auto laser diode power.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bach Q. Vuong whose telephone number is (703) 305-7355. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BV
September 15, 2004

THANH V. TRAN
PRIMARY EXAMINER